of that flow upon prices in different countries. It is too glibly assumed in this volume, in accord with the traditions of the older school, that the flow of specie not only takes place quickly but also influences prices quickly. As a matter of fact, it is by no means clear in what way it is a consequence of changed prices, or in what manner or with what rapidity it affects prices. The mechanism of the foreign exchanges does indeed simplify it, but also seems often to balk and prevent it. That the fundamental consequences analyzed in the older reasoning still are worked out is not to be doubted. But the problems are not so simple as is here implied. We have to learn more than we now know about the precise way in which the results are brought about.

Something of the same sort may be said of Professor Brown's treatment of protection and free trade. On that subject also he presents the irrefragable reasoning of the older school, and brushes aside with ease, almost with contempt, the commonplace fallacies about protection. There is hardly a word to be said against his treatment; except perhaps that the consequences which he adduces about the distribution of wealth, and especially about the development of economic rent, are much less important than the average reader would infer—these belong, I suspect, among the playthings of the deductive economist, not among the things of significance in the real world. But in any case there is more to be said on the working of protective duties in detail, and on the conceivable advantages to be secured by them, than Professor Brown is ready to grant. The German controversy between *Agrarstaat* and *Industriestaat* is not to be dismissed quite so lightly as is done by Professor Brown; and the possible advantage from protection to young industries is underrated by him. On all these topics a more tempered and judicial treatment is to be wished than we find in these pages. Upon the whole, Professor Brown's book may be said rather to state with discrimination and logical consistency the accepted framework of theory on international trade than to enrich our knowledge in the directions in which it needs enriching.

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Wealth and Welfare. By A. C. PIGOU. London: Macmillan, 1912. 8vo, pp. xxxi+493. $3.25 net.

This book—which is not so much a treatise as a more or less unified collection of essays—is a work in theory with a practical purpose. The practical problem with which it principally deals is, of course, the prob-

lem that is always with us: How shall we alleviate the poverty of the poor?[1] There are too many people in receipt of too small an income. They are unable to maintain a decent standard of living. And what income they do receive is too irregular and precarious. What is to be done about it?

That we ought to do something about it is taken for granted by Professor Pigou, which is simply another way of saying that he is a child of our own century and generation, touched by its passion and sharing its democratic ideal. But sharing as he does the sternest of classical traditions, he retains, for the most part, the presumption that no man should be relieved of the obligation to look out for his own welfare; so the construction of a systematic program of social reform is made very cautiously, and with many a look backward. In the end, however (if one may uproot some of his scattered proposals from their setting and gather them together), he subscribes to a consistent program, shaped with reference to a "national minimum." There must be some standard of living, he says—different for different nations and for different times—which is the least that can be tolerated, and this standard is capable of proximate determination. To help prevent a mass of citizens from falling below it, is one of the nation's foremost duties. In pursuing its duty it is called upon to commit itself to a more or less flexible constructive policy. It must foster the dissemination of knowledge, the improvement of communication, and the cheapening of transportation. It must likewise tolerate—even encourage—monopolies in certain lines, and must work out policies of public control, or public operation, that will harness them. It must, where mobility is imperfect or workmen unorganized, establish minimum wage-rates which correspond to the true competitive rate, "equal to the rate normally paid by 'reputable employers.'" The children of the poor must be kept out of the market and in school, and must be educated into greater competence, so that they can maintain themselves above the minimum. As for those who cannot be so educated, some of them must be prevented from propagating their kind—as by segregation. For most of the ill-paid classes there must be social

[1] "Several years ago I began to study the causes of unemployment. It soon became apparent, however, that . . . . an isolated treatment of them is scarcely practicable. Hence the gradual growth and more extended scope of the present volume" (Preface, p. vii). "The misery and squalor that surround us, the injurious luxury of some wealthy families, the terrible uncertainty overshadowing many families of the poor—these are evils too plain to be ignored" (p. 488). "The whole purpose of economic investigation . . . . is . . . . practical and utilitarian, concerned . . . . to help forward the betterment of social life" (p. 4).

insurance, and for some of them a rational kind of charity such as helps the poor to help themselves. Where public funds are needed, they should be raised more largely from taxes on "windfalls," income taxes, and (deferred) inheritance taxes.[1] Many a scholarly qualification, it must be added, is put upon each of the items of this program, and there are many things which find no place in it. Thus Professor Pigou does not place much reliance on Purchasers' Associations, or upon public operation of monopolistic enterprises. He does not subscribe to "government regulation which seeks to raise the wage-rate above the normal (competitive) level,"[2] or to attempts to "cure" incurable degenerates, such as the feeble-minded, or to the manufacture and sale, by the state, in times of depression, of goods that would ordinarily be made by private firms. In general outline, however, it can be seen that the author of *Wealth and Welfare* commits himself to a positive program, informed with a distinct constructive purpose. For this, both economic theorists and reformers will be properly grateful. But how much better it would have been, for both the economist and the general reader, if this program had been clearly presented in some one place in the book, in its large essentials, and its constructive aspects emphasized.

In respect to each item incorporated into what I have called the author's program, or rejected from it, he inquires whether action of the kind proposed will, or will not, increase the national dividend. "Welfare as a whole" is greatest, he believes, when the national dividend is at its (ideal) maximum. It is his fundamental proposition that this dividend is at its maximum when the marginal net product of resources in all uses is equal.[3] With regard to every condition, then, which might, by some means or other, be subjected to social control—such as the unhampered working of "self-interest," the extent of competition or monopoly, the mobility of resources, the transference of resources from the rich to the poor—he asks how far it approaches or departs from those ideal conditions under which the marginal net product of resources in all uses is equal, and the national dividend is consequently at its (ideal) maximum. It is by following this process, in a most painstaking way, that he arrives at his program.

The program at which he arrives, it must be admitted, corresponds pretty closely to the one to which the best liberal sentiment of his country—and ours—is substantially committed. But personally I do not find my liking for the program, my confidence in its soundness, or my passion for its accomplishment, made appreciably stronger by Professor

[1] Pp. 370, 371, 376. [2] P. 343, note. [3] P. 105.

Pigou's argument. I doubt if others will be specially impressed with it. But it is an imposing attempt, on an original plan, to give a consistent scientific basis to practical measures of progress, and it deserves searching examination on its own account. I will undertake to summarize its general features.

The national dividend to be maximized, then, comprises "everything that people buy (each year) with money income, together with such services as a man obtains from a house owned and occupied by himself." The "resources," whose marginal net product must be equal if the dividend is to be maximized, include a stock of land, and other instrumental goods, to begin with, and a quantum of human services put to productive use during the period under examination; they all appear to be "resources" because of their instrumental character (with reference to the satisfaction of wants), and because they are in fact scarce enough to bear a price. The "uses" in which the marginal net products of these resources must be equal include those uses, of a consumptional nature, to gratify which persons are willing to exert themselves, or pay something. The "products"—which must at the margin be equal—are the consumption goods, in concrete form, for which users pay money, or which they acquire directly through rendering valuable service. The products are "net," with reference to any one kind of resources entering into them, when their money value is sufficient to leave something over after remunerating the other kinds of resources which have served the one kind in auxiliary capacity.[1] And these net products are "marginal"—and so (quantitatively) comparable for the purpose in hand—when "produced" at one of those points at which an equal quantity of some other resource than the one from which they actually come might have served the same end, and been equally valuable. Starting, then, with a given quantity of "resources," the ideal distribution of them is this: that each kind shall, wherever technically possible, be substituted for the other, and composite units made up of resources of more kinds than one shall be shifted around, until there is no longer any place at which, considering the price of that single or composite unit, a greater specific product per unit can be obtained by further substitution or shifting. The national dividend is then at its maximum.

The general proposition involved is this: "As the quantity of any [one] factor increases, the value of *its* marginal net product decreases"[2] (insert and italics mine). If labor be one kind of resource, therefore,

[1] See Marshall, *Principles of Economics*, 6th ed., p. 406.

[2] P. 81.

and "non-labor" the other, changes in the quantity (or technical efficiency) of either kind of resources will change the location of the point of (indifferent) substitution, and consequently the magnitude of the marginal (net) product of a unit of *either* kind. Wages, then, and the well-being of the poor, can be improved only by changes, from whichever side originated, that raise the marginal net product of labor, *and*, at the same time, raise the marginal net product of all other kinds of resources. The measures approved by the author, some of which are set forth above as his constructive program, are said to have this effect; those excluded are said not to have it.

It will be recognized by many, of course, that most of this analytical and conceptual apparatus belongs to the equipment used by Dr. Marshall; Professor Pigou takes it for granted that the trained economist, at least, will understand it all beforehand, and so he takes no particular pains to explain it. I am obliged to confess that I do not understand what it all means, even after I have formulated its essentials with that trouble which I resentfully believe the author should have saved me. I cannot, in the first place, conceive of any unit in which land, machines, waiting, routine labor, invention, supervision, uncertainty-bearing, and the like, might be measured, in order, first, that the count may be made of all the units of all of them, and a quantum of resources arrived at, and in order, secondly, that we may tell whether the marginal net product of a unit of one of them is, or is not, equivalent to the marginal net product of a unit of another. The "pound's worth" is not a technical unit. In the second place, I cannot see how it is possible to conceive of the (separate) product of a unit of one factor—say labor—comparable with the (separate) product of another factor—say "non-labor"—which we must do if we are to affirm an equality among marginal (technical) productivities. For we never find a factor "producing" in isolation; all we can really observe, and all that I can even conceive, is that *all* the resources "produced" *all* the product. We cannot affirm that all products are so homogeneous that any (technical) unit can be applied to all of them.

When both resources and product are "measured" in value units, however, the whole (net-productivity) proposition amounts to saying that all prices, including all kinds of wages for all kinds of labor, and pseudo-prices for all uncertainty-bearing, and all kinds of hires for all kinds of instrumental goods, and all prices for all kinds of commodities, bear relationships to one another in some sort of interdependent price-system. Determinants, *within this system*, are, on the one side, of a

technical nature, for substitution is here and there possible, elsewhere impossible, and, on the other side, of an economic nature, for the prices through which the relationships subsist are themselves dependent on the stocks (and supplies) of the various resources, and on the demands for them and for their products. That there is interdependence subsisting among the various elements in the price-system, and that it is of a certain nature, can, I think, be better set forth without reference to "the question-begging term productivity."[1] And, when finally set forth, it throws no light upon the question whether the existing order, or any other proposed order, or distribution of resources, tends to "maximize welfare"; it shows only that the price-system, in order to be internally harmonious, must cohere in a certain way. That it is itself consistent with *any* tenable ideal of social progress, or welfare, remains to be proved, still more that it is consistent with *every* tenable ideal, as anyone undertaking the author's task is practically obliged to assume. The ideal Professor Pigou does assume, apparently, wedded as he is to the concept of "satisfactions," of which prices are supposed to be an index, is something like this: "satisfactions" should be maximized, and the way to do it is to carry so far as practicable the supplying of *existing* potential demands—historical in their origin—and to effect a distribution that corresponds with the temperamental (and acquired) capacity of individuals for the enjoyment of "satisfactions."[2] Such an ideal, I think, cripples his analysis at every fundamental point. The formal accept nce of human personality, or character, of which the instructed social conscience is the only ultimate judge, as the central conception of the ideal now most tenable, would have gone a long way toward helping the author to make his analysis and test his program. Only here and there, in fact, and somewhat as an afterthought, does he allow this notion to raise its head.[3]

In the final sixth of the book, which stands somewhat apart, the author discusses what he calls "The Variability of the National Dividend." Its practical purpose is to throw light on the ways in which both the money income and the "real income" of the representative wage-earner may be steadied. Except for an excellent chapter on (social) insurance, and a much less effective one on public and philanthropic control of the (variable) demand for certain kinds of labor, this part of the book cannot be called very successful. Both the chapters mentioned, it seems to me, would have been quite as strong if they stood

[1] Professor Davenport's expression. See his *Economics of Enterprise*.

[2] Cf. pp. 48, 49, and elsewhere.

[3] For example, pp. 7, 28, 53, 345, 358, 362.

alone. The author concludes,[1] after an involved inquiry, that crises and depressions are probably caused mainly by variations in the bounty of nature, that is, in the crops, together with the mistakes business men are prone to make with regard to such demands as vary with the crops. The positive suggestions made are few and not novel—witness a deliberate subscription to some such scheme as that of Professor Fisher for steadying general prices,[2] and to the suggestion that the government publish every month information about "construction under contract,"[3] both of which have been rather more effectively defended by other lines of argument than that employed here. Nowhere else in the book, in my opinion, does the labored attempt to make the national dividend the leading idea work out in such an unfruitful manner.

There are, in my judgment, about twelve selections from the book that might profitably be consulted by any advanced student of theory: the exact meaning of the "national dividend" (pp. 18–20); construction of an index number (pp. 35–51); the law of diminishing productivity (pp. 80–81); note on uncertainty-bearing (pp. 95–103); capital and uncertainty-bearing (pp. 130–34); a theoretical basis for special taxes on industries of diminishing returns and for bounties to industries of increasing returns (pp. 172–79); the conditions of highly elastic demand (after Marshall) (pp. 186–89); the special (monopoly) case of railway rates (pp. 215–36); elasticity of the demand for labor (pp. 321–25); the meaning of a "national minimum" (pp. 394–95); the elasticity of the "supply" of money (pp. 426–32); sources of error in business forecasts (pp. 455–66). I know of few things better on any of these topics, and one of them—relating to industries of increasing and industries of diminishing returns—is as original as it is obscure; it has been translated and criticized by Professor Young in an earlier review of this book.[4]

Those who live long enough with *Wealth and Welfare* to enable them to mature their judgment of its real significance are likely to find themselves disappointed in it. This is not because of any superficiality in the author's grasp of orthodox principles of theory, for he knows these; nor because of slips in his logic, for these are negligible; nor because of its severity and abstruseness, for its motive is unmistakably "practical." What seems its real lack, which leaves it on the whole *scholastic*, is orientation. It lacks orientation on the scientific side, because it shows but slender traces of the influence of modern psychology and social ethics; witness the inadequate and individualistic identification of

[1] Pp. 474–75. [2] Pp. 438, 464. [3] P. 457.

[4] In the *Quarterly Journal of Economics*, XXVII, August, 1913, 672–86.

"satisfactions" with welfare. It lacks orientation on the practical side, because it shows little of that quality of shrewd and balanced judgment such as comes from responsible participation in affairs, either in person or through intimate association with men of business and public administration. One could infer with some confidence, from the author's treatment, that he has probably never tried to "make money" himself, or help anybody else make any, that he has probably never held administrative posts himself, and that his conversational acquaintance with business men and administrators is not fruitful. This is, of course, only another way of saying that he has not emancipated himself from the scholastic tradition—as most of us, perhaps, who aspire to economic theory have not yet succeeded in doing. Surely it is only by keeping abreast of the thought and action of one's time, and that largely through intimate association with his scientific colleagues in other lines, and with men of business and public affairs, that a theorist can tell just what are the important and timely questions to ask himself, as a specialist, and can acquire the "wisdom" necessary to pass the right judgment on the quality of his answers.

For his insight into the need for more unity than economic science has yet been able to achieve, and for his courageous attempt to achieve it by reference on the one side to practical social need, and on the other to the "master concept" of the national dividend, the author enlists my sincere admiration. It is a splendid thing to essay so great a task, refusing to be deterred by one's handicaps. If, as in the present case, the handicaps are rather serious, they are fortunately not all of an irremediable kind. We may cherish the hope that Professor Pigou will gradually overcome them in his later work; he is only thirty-seven, and no post could be more inspiring than the one so long held by Professor Alfred Marshall. But I do not think the national dividend will turn out to be the "master concept"; this book measurably proves as much.

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La concorrenza. Sistema e critica dei sistemi. By EMANUELE SELLA. Vol. I. Turin: Fratelli Bocca, 1915. 8vo, pp. xvi +503. L. 10.

The present volume is but the first part of a larger work which Professor Sella has in mind, and well in hand, to be completed in three parts, one volume to each part. Part I, having something like an independent